

# Network analyzers

## ADR-D 400 D90

### DIMENSIONS (mm)

### CONNECTION DIAGRAM

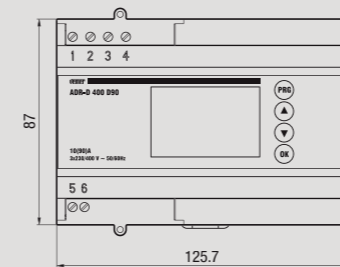
The ADR-D 400 D90 network analyzer is a direct connection digital multimeter for three-phase systems up to 90 A for true effective value measurements (TRMS). The isolated RS-485 serial output allows, through the MODBUS protocol functions and the use of the relative registers, to connect the analyzer to a Master device (PC/PLC...) for data visualization and archiving.



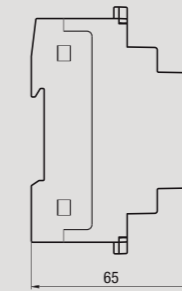
- 1 Through holes for direct connection
- 2 Instrument programming keys
- 3 Backlit display to view the electric measurements

- Measured sizes:
  - Voltages (TRMS) (concatenated and phase)
  - Currents (TRMS)
  - Active power, reactive power, apparent
  - Active and reactive energy
  - Frequency
  - Power factor ( $\cos \varphi$ )
  - Phase angle

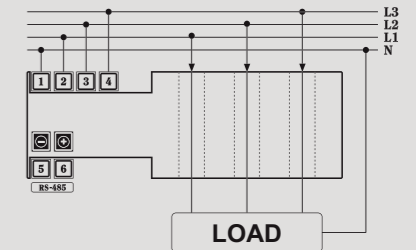
#### Front view



#### Side view



#### Diagram



## MEASUREMENT AND CONTROL

### TECHNICAL INFORMATION

#### ADR THREE-PHASE DIRECT CONNECTION

- Measurement and display of the measurements on a three-phase system: voltage, current, active, reactive and apparent power, power factor, frequency, active and reactive energy
- Separate power supply independent from the measurement
- Maximum measurable current: 100 A
- Maximum overload in continuous use maintaining class 1: 100 A
- Direct connection of the voltage cable
- Direct connection of the current cable (diam. 12.5 mm - max section of the cable 25 mm<sup>2</sup>)
- LCD display
- Zeroable active and reactive energy meter
- Timed or disable backlighting
- RS-485 serial output with Modbus RTU communication protocol
- Usable in three-phase systems with neutral (with balanced and unbalanced load)
- Usable in three-phase systems without neutral (with balanced and symmetrical load only)
- Over current and overvoltage indication
- Failure connection indication



#### GENERAL CHARACTERISTICS

Power supply	Vac	400 (-15 ÷ +10%)
Frequency	Hz	50 / 60
Measurement power consumption	VA	- voltage circuits: <2.5 - current circuits: <2.5 - power supply: <4
Amperometric inputs	A	$I_n = 10$ ; $I_{max} = 90$
Maximum overload in continuous use maintaining class 1	A	100
Voltmetric inputs		$V_{max} = 440$ V (phase-phase) $V_{max} = 3 \times 253$ V (phase-neutral)
Voltage precision		$\pm 0.5\%$ f.s. $\pm 1$ digit (f.s. 253 V)
Current precision		$\pm 0.5\%$ of f.s. $\pm 1$ digit (f.s. 90 A)

Active power precision		$\pm 1\%$ of f.s. $\pm 1$ digit (f.s. 100 W - 1 kW - 10 kW - 100 kW)
Reactive power precision		$\pm 1\%$ of f.s. $\pm 1$ digit (f.s. 100 W - 1 kW - 10 kW - 100 kW)
Power factor precision		$\pm 1\%$ , $\pm 1$ digit
Frequency precision		$\pm 0.1$ Hz $\pm 1$ digit
Active energy precision		Class 1
Reactive energy precision		Class 3
Display		backlit LCD display
Container		7 DIN modules
Protection degree		IP20 / 51 on the front
Voltmetric input terminal		2.5 mm <sup>2</sup>
Serial output RS-485 terminal		2.5 mm <sup>2</sup>
Operating temperature	°C	-10 ÷ 45
Storage temperature	°C	-10 ÷ 60
Humidity	RH	10 ÷ 90% RH non condensing

#### REFERENCE STANDARDS

Compliance with Community directives:  
2014/35/UE (LVD), 2014/30/UE (EMCD)  
is declared in reference to the following harmonised standards:  
• EN 61010-1 • EN 61000-6-2 and EN 61000-6-4 • EN 62053-21 and EN 62053-23 (metrological requirements)

Code	Model	Description
VE045100	ADR-D 400 D90	Direct-connection three-phase network analyzer 90 A



ADR-D 400 D90-ENG-202307

